State of West Virginia Department of Environmental Protection Office of Oil and Gas

DATE: 7/20/2012 API #: 4709101257

Well Operator's Report of Well Work

Farm name:	HOVA	TTER, BEA	TRICE	Operator Well	No.:	20		
LOCATION	I: Elevation: 1440'		Quadrangle:	THORNTON				
	District:	KNOTT	SVILLE	County:		TAYLOR		
	Latitude:	4.190	Feet South of	39 Deg.	20	Min. 0 Sec.		
	Latitude: Longitude:	7,400	Feet West of	79 Deg.		Min. 30 Sec.		
	Texas Keystone,					, 		
				Casing &	Used in	Left in well	Cement fill up	
Address:	560 Epsilon Driv	ле		Tubing	drilling		Cu. Ft.	
	Pittsburgh, PA 1							
	Jon Farmer	2250		13 3/8"	40	40	Sanded In	
	Bryan Harris			13 5/0	10	10	Bunava m	
Date Permi		12/12/	11	9 5/8"	463	463	120	
	Work Commence			7 5/6	705	105	120	
	Work Completed			7"	1733	1733	250	
Verbal Plus		1: 00/00/	12	/	1/33	1733	230	
	gging: ssion granted on		<u></u>	4 1/2"	0	5218	205	
			· · · · · · · · · · · · · · · · · · ·	4 /2	-	J218		
		Rig				* * * * * * * * * * * * * * * * * * * *		
	cal Depth (ft.):					Article State of the Control of the		
	ured Depth(ft.):							
	r Depth (ft.):					<u> </u>	<u>98 2012 - </u>	
		535, 580						
	g mined in the a		N			9 / 35		
Coal Depth		320					***	
Void(s) enc	ountered (N/Y)	Depth(s):	N	<u> </u>		Design and		
	W DATA (If me Producing formates Gas: Initial open flow Time of open flow Static rock Press	tion: flow: Go 36 w between in	3RD ELK /S TSTM 8 nitial and final te	-	Pay zone MCF/D MCF/D Hours	ional data on separate Depth (ft) 5 Oil: Initial open flow Oil: Final open flow: ce pressure) after	042 - 5030 : <u>0</u> Bbl/d	
	Second Producin	g formation:	1ST ELK		Pay zone	Depth (ft) 4	771 - 4779	
	Gas: Initial open	-	o-mingled		MCF/D	Oil: Initial open flow	: <u>0</u> Bbl/d	
	Final open flow	Co	o-mingled		MCF/D	Oil: Final open flow:	0 Bbl/d	
	Time of open flo	w between ii	nitial and final te	sts:	Hours			
	Static rock Pressure: Co-mingled			psig(surface pressure) after			- Hours	
						th the information su		

obtaining the information I believe that the information is true, accurate, and complete.

Were co	ore samp	oles taken?	Yes	No_X_	Were	cuttings caught during drilling?	Yes	No X
Were	N V/N	_Electrical,	N	Mechanical, _	Y	or Geophysical logs recorded on	this well?	

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL

Perforated Intervals, Fracturing, or Stimulating:

Perfed 3rd Elk 5042' - 5060' (30 shots). BD 4081 #. 250 sks 40/70 & 109 sks 20/40. 757 bbl. Gel Frac.

Perfed 1st Elk 4771' - 4779' (18 shots). BD 2800 #. 100 sks 40/70 & 84 sks 20/40. 515 bbl. Gel Frac.

Perfed Alexander 4336' - 4341' (20 shots). BD 3667 #. 100 sks 40/70 & 88 sks 20/40. 485 bbl. Gel Frac.

Perfed Balltown B 2950' - 2959' (21 shots). BD 3475 #. 100 sks 40/70 & 110 sks 20/40. 460 bbl. Gel Frac.

Perfed Speechley A 2353' - 2368' (22 shots). BD 3667 #. 100 sks 40/70 & 110 sks 20/40. 478 bbl. Gel Frac.

Formations Encountered:	Top Depth	Bottom Depth	Notes:
FILL	0	10	
SHALE	10	30	
SANDY SHALE	30	45	
SHALE	45	70	
SAND	70	110	
SHALE	110	160	
SANDY SHALE	160	320	1/2" FW @ 270'
COAL	320	330	112 1 11 (6) 270
SANDY SHALE	330	365	
SAND	365	500	
SANDY SHALE	500	785	3" SW @ 535', 1" SW @ 580'
RED ROCK	785	835	5 5 (B 333 , 1 B (B 330
SANDY SHALE	835	985	
SAND	985	1058	
LITTLE LIME	1058	1074	
PENCIL CAVE SHALE	1074	1098	
BIG LIME	1098	1384	
WEIR SANDSTONE	1384	1432	
SHALE	1432	1534	
BEREA SANDSTONE	1534	1550	
UPPER GANTZ SANDSTONE	1550	1580	
GANTZ SANDSTONE	1580	1621	
LOWER GANTZ SANDSTONE	1621	1647	
SANDY SHALE	1647	2287	
BAYARD SANDSTONE	2287	2349	
SPEECHLEY A SANDSTONE	2349	2373	
SANDY SHALE	2373	2420	
SPEECHLEY B SANDSTONE	2420	2838	
BALLTOWN A SANDSTONE	2838	2949	
BALLTOWN B SANDSTONE	2949	3106	
BALLTOWN C SANDSTONE	3106	3111	
SANDY SHALE	3111	4112	
BENSON SILTSTONE	4112	4144	
SANDY SHALE	4144	4319	
ALEXANDER	4319	4375	
SHALE	4375	4506	
1ST ELK SILTSTONE	4506	4572	
SANDY SHALE	4572	4731	
2ND ELK SILTSTONE	4731	4800	
SANDY SHALE	4800	5019	
3RD ELK SILTSTONE	5019	5091	•
SANDY SHALE	5091	5365	
5TH ELK SILTSTONE	5365	5400	
SHALE	5400	5760	TD

Third Producing formation:	ALEXANDER	_Pay zone	Depth (ft)	4336 - 43	41		
Gas: Initial open flow:	Co-mingled	MCF/D	Oil: Initial open flow	v: 0	Bbl/d		
Final open flow	Co-mingled	MCF/D	Oil: Final open flow	r: 0	Bbl/d		
Time of open flow between	initial and final tests:	Hours					
Static rock Pressure:	Co-mingled	psig(surface pressure) after			Hours		
Fourth Producing formation	: BALLTOWN B	_Pay zone	Depth (ft)	2950 - 5 <u>9</u>	59		
Gas: Initial open flow:	Co-mingled	MCF/D	Oil: Initial open flow	v: <u>0</u>	_Bbl/d		
Final open flow	Co-mingled	MCF/D	Oil: Final open flow	r: <u>0</u>	Bbl/d		
Time of open flow between	initial and final tests:	Hours					
Static rock Pressure:	Co-mingled	_psig(surf	ace pressure) after	_	Hours		
_							
Fifth Producing formation:	SPEECHLEY A	Pay zone	Depth (ft)	<u> 2353 - 23</u>	68		
Gas: Initial open flow:	Co-mingled	MCF/D	Oil: Initial open flow	v: <u>0</u>	_Bbl/d		
Final open flow		MCF/D	Oil: Final open flow	r: <u>0</u>	_Bbl/d		
Time of open flow between	initial and final tests:	Hours					
Static rock Pressure:	Co-mingled	_psig(surf	ace pressure) after		_Hours		

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